13

the destination zone group identifier based on information associated with the received SAS frame.

#### 12. The circuit of claim 7

wherein the memory circuit is further adapted to store route information associating a destination identifier with a 5 corresponding port of the SAS expander.

### 13. A zoning SAS expander comprising:

- a first port coupled to receive a SAS frame from a source device:
- a second port coupled to forward a received frame to a 10 destination device;
- a content addressable memory (CAM) adapted to store zone group identifier information associated with identified devices:
- a zone permission table adapted to receive a source zone group identifier associated with a source device identified by a source identifier and adapted to receive a destination zone group identifier associated with a destination device identified by a destination identifier and adapted to determine if a received SAS frame may be forwarded from a source device to a destination device based on a received source zone group identifier and based on a received destination zone group identifier; and

control logic coupled with the first port and the second port 25 and coupled with the CAM and coupled with the zone permission table, the control logic adapted to receive a SAS frame on the first port and adapted to apply a source identifier in the received SAS frame as an input to the CAM to generate a source zone group identifier and 30 adapted to apply a destination identifier in the received SAS frame as an input to the CAM to generate a destination zone group identifier; and further adapted to apply the source zone group identifier to the zone permission table and to apply the destination zone group

14

identifier to the zone permission table, and further adapted to forward the received SAS frame to the device identified by the destination identifier only if the zone permission determines that the received SAS frame may be forwarded to the device identified by the destination identifier.

## 14. The expander of claim 13

wherein the control logic further comprises:

pipeline logic circuits configured to apply the source identifier to the CAM circuit during a first clock cycle and configured to apply the destination identifier to the CAM circuit during a subsequent clock cycle and configured to store the source zone group identifier generated by the CAM circuit as the destination zone group identifier is generated by the CAM circuit.

### 15. The expander of claim 13

wherein the control logic further comprises:

source identifier selection logic adapted to selectively override the source zone group identifier generated by the CAM and further adapted to generate the source zone group identifier based on information associated with the received SAS frame.

# 16. The expander of claim 13

wherein the control logic further comprises:

destination identifier selection logic adapted to selectively override the destination zone group identifier generated by the CAM and further adapted to generate the destination zone group identifier based on information associated with the received SAS frame.

#### 17. The expander of claim 13

wherein the CAM is further adapted to store route information associating a destination identifier with a corresponding port of the SAS expander.

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